Oceanographic Environments at the Area Where the Unidentified Animal Was Trawled*

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The unidentified animal was trawled at 43°57.5′ S, 173°48.5′ E, on the continental slope which extends off the Banks Peninsula, on Apr. 25, 1977, and was thrown away at

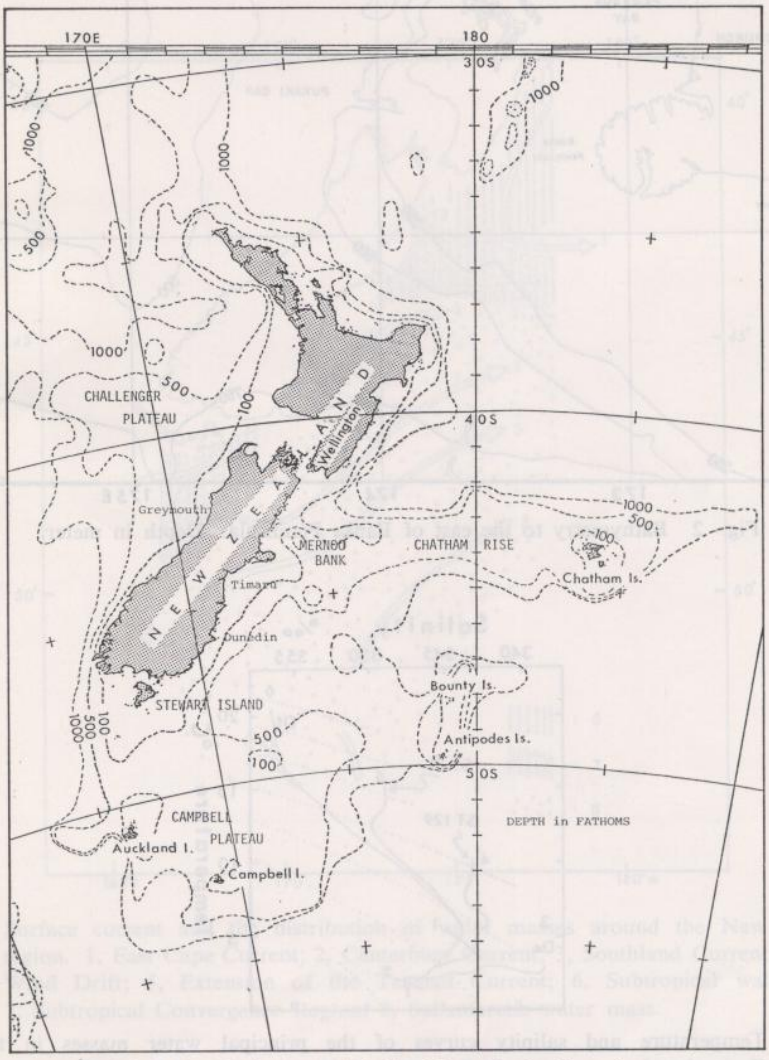

Fig. 1. Bathymetry of the New Zealand region.

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44°10.0′ S, 173°30.0′ E on the same day (Fig. 1).

The ocean floor around the Banks Peninsula has extensive areas of continental shelf which continues eastwards for a distance of approximately 30 miles (Fig. 2). To the east

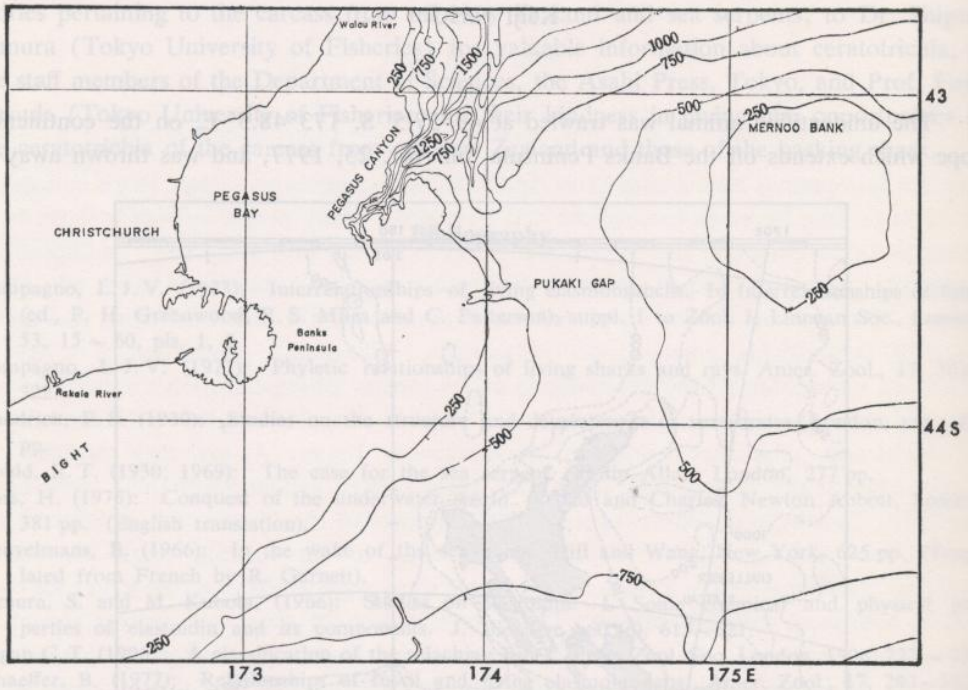

Fig. 2 Bathymetry to the east of Banks Peninsula. Depth in meter.

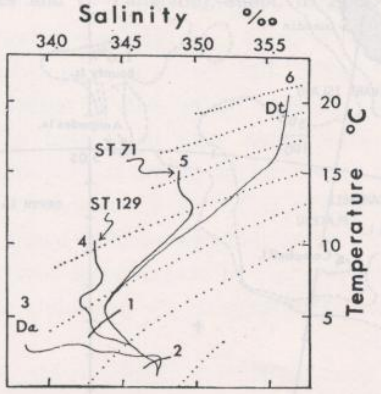

Fig. 3. Temperature and salinity curves of the principal water masses in the New Zealand region. 1, Antarctic Intermediate Water; 2, Warm Deep Water; 3, Antarctic water mass; 4, Subantarctic water mass; 5, Subtropical Convergence; 6, Subtropical region. Da and Dt show the data obtained by the British research vessel, the Discovery.

of the point at which the unidentified animal was obtained, the Chatham Rice runs eastward as far as Chatham Island.

Water masses at waters adjacent to the point where the carcass was trawled are dominated by subtropical waters which flow southwards and subantarctic waters which flow northwards (Figs. 3, 4). These two water masses form a subtropical convergence where they meet.

Considering these topographic and oceanographic environments, the unidentified animal seems to have died in a certain area south of the capture point. The carcass thrown away would have moved along the southern slope of the Chatham Rise.

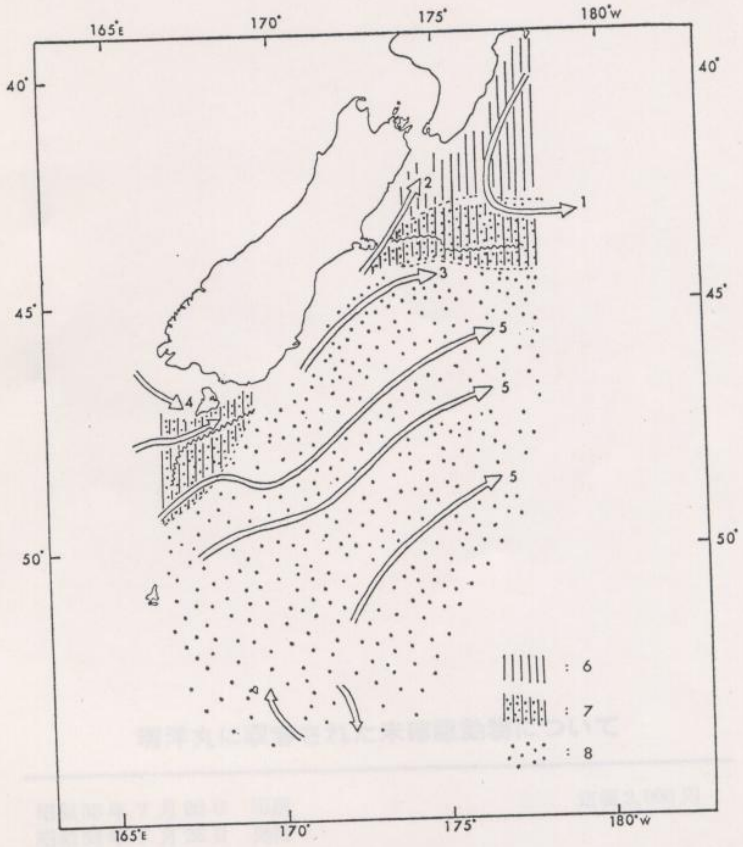

Fig. 4. Surface current and the distribution of water masses around the New Zealand region. 1, East Cape Current; 2, Canterbury Current; 3, Southland Current; 4, West Wind Drift; 5, Extension of the Tasman Current; 6, Subtropical water mass; 7, Subtropical Convergence Region; 8, Subantarctic water mass.

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